



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

m.f

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,570	04/12/2004	Harald Hagen	11138-011	2634
757	7590	08/30/2006	EXAMINER	
BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610			BOCHNA, DAVID	
			ART UNIT	PAPER NUMBER
			3679	

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/822,570	<b>Applicant(s)</b> HAGEN ET AL.	
	<b>Examiner</b> David E. Bochna	<b>Art Unit</b> 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9, 15-16, 21 and 23-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Enger et al.

In regard to claims 1-9, Enger et al. discloses a connection system for conduits comprising a first coupling part 2, a second coupling part 17 and at least one gas-permeable circumferential seal 4 which consists of an elastomer and is arranged in a groove having a depth, and length which is formed circumferentially in one of the first and second coupling parts, the second coupling part 17 being capable of being plugged into a round receiving orifice of the first coupling part 2 after plugging in, the seal deforming and sealing off a gap and bearing against the first and second coupling parts over a contact length ruling in the axial direction perpendicularly to the inner and outer radius of the first and second coupling parts wherein the cross section of the nonpressed circumferential seal, the groove depth and the gap width and the groove length are coordinated with one another in such a way that a ratio of a permeation-active partial circumferential area of the circumferential seal to the contact length that determines a permeation through the circumferential seal. Enger et al. does not disclose that the partial circumferential area is no greater than half,  $1/5^{\text{th}}$  the value of a cross-sectional area of the deformed circumferential seal or any of the other relative dimensions recited in claims 3-9 and 15.

Art Unit: 3679

However, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to supply a seal and coupling parts with these dimensions because the optimization of proportions in a prior art device is a design consideration within the skill of the art. In re Reese, 290 F.2d 839, 129 USPQ 402 (CCPA 1961).

In regard to claim 16, the first 2 and second 17 coupling parts are metallic.

In regard to claim 21, two circumferential seals 4, 3 are arranged one behind the other in the axial direction.

In regard to claims 23 and 24, Enger et al. anticipates these claims because they are considered intended use claims, drawn to the use of the connection system, not structural limitations of the claimed connection system.

3. Claims 10-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Enger et al.

In regard to claims 10-14, Enger et al. discloses a seal with a circular cross-section, but not seals of varying shapes as recited by the Applicant. However, it would have been obvious to one of ordinary skill in the art to make the seal in various shapes because A change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

4. Claims 17-20, 22 and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Enger et al.

In regard to claims 17-20, 22 and 25-30, Enger et al. discloses a elastomeric seal and metallic coupling parts, but does not disclose the various seal materials and coupling surface properties recited by the Applicant. However, it would have been obvious to one of ordinary skill in the art to make the seal and coupling parts out of the various materials because the

Art Unit: 3679

selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

5. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Enger et al. in view of EPO patent publication 1,213,515. Enger et al. discloses a seal 4 used to contain fluid in a pressurized joint, but does not disclose that the seal has a gas barrier coating. EPO patent publication '515 teaches supplying a gas barrier coating 3 to a seal 2 in order to improve upon the sealing properties of the seal. Therefore it would have been obvious to a person having ordinary skill at the time the invention was made to modify the seal of Enger et al. to include a gas barrier, as taught by EPO '515, in order to improve upon the sealing properties of seal.

#### ***Response to Arguments***

6. Applicant's arguments filed 6/15/06 have been fully considered but they are not persuasive. Applicant argues that Enger et al. does not deal with the problem of fluid permeation through a seal and rather that Enger deals with preventing leakage between the coupling parts and the seal. The Applicant also states that generally the main sealing problem does not include fluid permeation through the seal, but instead includes how to prevent a leakage stream through the gap between the coupling parts, which have been connected. The Examiner disagrees.

The main sealing problem includes how to prevent fluid from leaking from the internal fluid path of the joined components to the exterior of the joined components. This problem includes choosing a proper material for the seals so that fluid does not permeate or dissolve the seal and allow leaks to occur. One skilled in the art would know to choose seal material based on the properties of the fluid for which the seal material is meant to seal. Enger et al. discloses a

Art Unit: 3679

connection that contains seals for the purpose of providing a fluid tight joint. Adding the gas permeable barrier coating, as taught by EPO publication '515, would only improve upon the intended sealing properties of the seal disclosed by Enger et al. One skilled in the art would be motivated to solve the problem of fluid permeation through the seal in order to improve upon the sealing properties of the entire joint as a whole.

Applicant argues that Enger does not mention that the dimensions of the seals and sealing grooves as being of importance for the fluid permeation. However, Enger does choose dimensions for these components to impart proper sealing forces between the mating components. One of ordinary skill in the art would have reason to optimize the groove and seal geometry in order to create the best sealing forces between mating components and improve upon the sealing capabilities of the joint. The reason to optimize the seal dimensions of Enger does not have to be for the same reasons as those disclose by the Applicant.

### ***Conclusion***

**7. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 3679

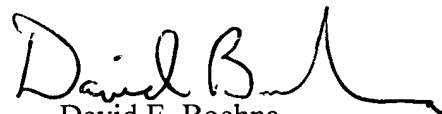
however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Bochna whose telephone number is (571) 272-7078.

The examiner can normally be reached on 8-5:30 Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
David E. Bochna  
Primary Examiner  
Art Unit 3679